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CALIFORNIA OLIVES

SITUATION AND OUTLOOK, 1947

ARTHUR SHULTIS

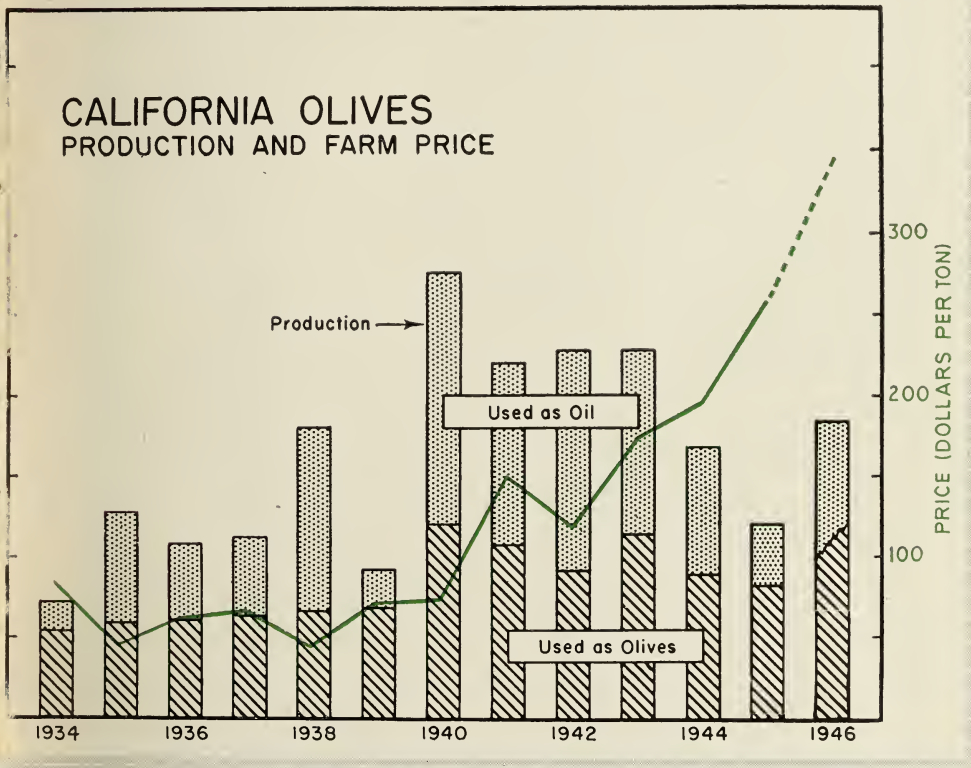

FIGURE 1

THE COLLEGE OF AGRICULTURE
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What of the Future?

Will the olive situation be more like it was before the war, when prices were poor and yields low?

TREND	OUTLOOK
Supply and Demand	
The supply of olives for direct human consumption was well maintained during the war by California production and by imports, but there were not always enough of all types available on retail shelves at all times. This would seem to indicate an increase in demand, but it must be discounted somewhat because of wartime shortages, rationing, and price controls.	The gain in olive consumption made during the war can probably be held. Consumer desire for olives can be further increased by good advertising and trade promotion.
Production	
Better cultural care, increased age of trees, and favorable climatic conditions have resulted in a tremendous increase in average annual production through increased yield per acre.	Recent high yields can probably be maintained or further increased with good cultural care, which would be stimulated by continued good prices. Older orchards and some recent plantings yet to come into production indicate an upward trend in total production, but not over 20 per cent increase in the next fifteen years.
Orchard Profits	
Olives were not so profitable a crop as most other fruits in the 1930's, but during the war they became rather profitable, and compared favorably with other alternative crops.	With continuing high costs, orchard earnings will decline as olive prices go down. But heavy-producing orchards can show a profit for many years.

Or will it continue to follow the trend of high prices and large yields maintained during the war?

Let's Look at the Facts

TREND	OUTLOOK
Prices	
The farm price of California olives has risen to profitable levels during the last six years. Ripe canning olives rose from an average of $88 a ton (1935–1939) to $156 (1940–1944), and olives crushed for oil, from $37 a ton to $112, for the same period. Farm prices of all olives rose from $56 to $139 a ton. The 1945 crop brought $269 a ton, and the preliminary estimate for the 1946 crop is $352.	With heavy production continuing and a large proportion of olives still going for oil at much lower prices than those for canning, lower prices for all olives are to be expected as soon as olive oil prices drop to their postwar level.
Imports	
Olive imports, largely from Spain, were well maintained during the war, and enabled an increased per-capita consumption. Imports of olive oil fell to almost nothing during certain war years, and for the 1940–1944 period were only about 23 per cent of the previous five years. But California's olive oil output more than doubled as a result of higher prices and the large increase in the state's total olive production.	Olive imports will probably continue at about the same level as before and during the war. Imports of olive oil will probably increase to prewar levels within two or three years, which will bring down the price of California olive oil and oil olives.
New Plantings	
Before the war, new plantings averaged about 100 acres per year, but rose to an average of 450 acres for the four years 1942–1945.	It is too late for additional plantings to share in the good earnings of the next few years, and the long-time outlook does not warrant additional plantings at this time.

CALIFORNIA OLIVES

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ARTHUR SHULTIS[1]

WHAT PRICES and earnings can be expected from olives over the next ten years? Will it pay to plant additional orchards? These and similar questions are important now to those who are interested in growing and handling olives. Definite answers are not available, but we can see what has happened to prices with changes in supply and demand factors in the past. And we can project some of these factors into the future. This circular has been prepared to present some of these facts with a little interpretation.

Price Factors

Olive prices are determined by demand *and* supply. *Demand is the ability and desire of consumers to buy olives and olive oil. Our supplies of olives and olive oil are from California production and from imports. We can predict the probable level of California production and imports for perhaps ten years ahead. Demand factors can be forecast less clearly, and for only a few years. These will help us to see what may be expected, even though we may not be able to predict a specific price.*

Price Paid Depends on Use.–The use made of California olives is a most important factor in determining the average price paid for all olives (see fig. 1, cover). Figure 2 shows that, except for the war years, canning olives have brought more than olives crushed for oil. Up to now we have needed the oil outlet for cull and small olives and for surplus olives in years of high production. Keeping in mind the two outlets for olives—canning and oil—let us consider the various uses for California olives within those outlets.

TABLE 1

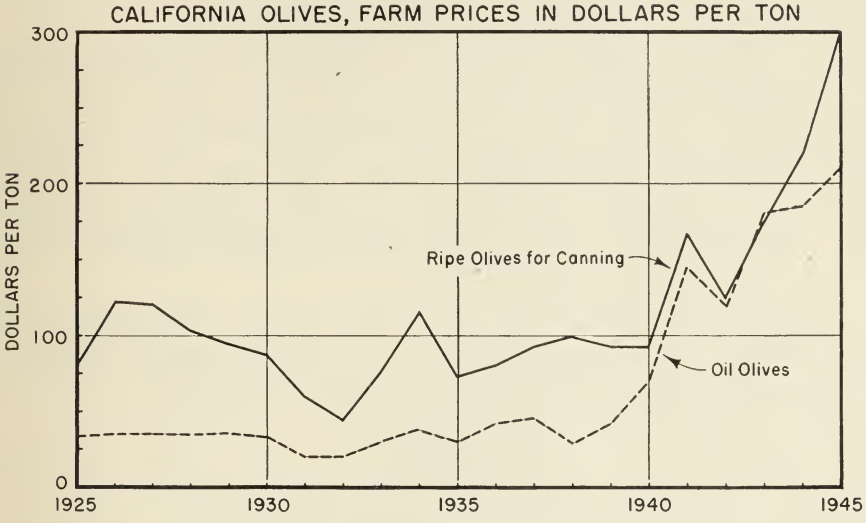
UNITED STATES AVERAGE ANNUAL UTILIZATION OF OLIVES BY SOURCE

	California olives used as olives	Imports of olives	Total utilized as olives	Per cent of supply from		Pounds per capita
				California	Imports	
	tons	tons	tons	per cent	per cent	pounds
1925–1929	10,380	20,730	31,110	33	67	.53
1930–1934	10,500	20,540	31,040	34	66	.50
1935–1939	15,100	19,640	34,740	44	56	.54
1940–1944	24,940	22,180	47,120	53	47	.70

[1] Extension Specialist in Farm Management and Associate on the Giannini Foundation.

Importance of California Olives.—Practically all the olives produced in the United States are grown in California. This includes about half the country's eating olives—44 per cent during the five years before the war (51 per cent of California production) and 53 per cent during the war years. Most of the country's olive oil, however, was imported before the war. With 49 per cent of its olives used for making oil, California furnished only 7 per cent of the edible olive oil used from 1935 to 1939.

FIGURE 2



Utilization

California olives are processed into a number of types and forms, each with its own consumer appeal and demand. The canned ripe olive and olive oil have been the principal outlets for California olives over the years, although recently, with increased total production, other products are being tried. These include Spanish- and Sicilian-type green olives, and Greek-type olives.

Canned Ripe Olives.—Canned ripe olives have been the principal and most profitable outlet for California olives in recent years, usually returning two or three times as much as oil. For this type, the olives are picked when straw-colored and may be held for several weeks in brine, for processing. The olive industry expects the canned ripe olive to remain in top place in future, and is rather confident that demand will continue to increase. Exporting countries have difficulty in producing ripe olives free of insect damage. The import duty on ripe olives is also higher than on green olives.

The green-ripe olive is a variation of the canned ripe. Although meeting with good consumer acceptance, the quantity that can be processed in this form

is limited since the olives must be picked and processed quickly. Table 3 shows the main ways in which California olives have been used in recent years.

Spanish-type Green Olives.—Spanish-type green olives have been processed here in considerable volume since 1940, and are more widely known and used outside California than is the canned ripe olive. Most of our imported olives are of this type. Heavy olive production and recent good demand and prices have encouraged the California producers to enter this field. Imports, however, are expected to furnish the bulk of the supply, which may result in a lower return from this type of utilization than from the canned ripe.

Sicilian-type Green Olives.—For this type, the olives are picked green. They are fermented in brine and frequently packed with peppers, spices, and garlic for flavoring. Their somewhat bitter flavor is often preferred by Italo-Americans and others. Since demand is limited, this type is not expected to be as large nor as profitable an outlet as canned ripe and Spanish-type green olives. This process may, however, offer an outlet for surplus olives not suited to oil production, such as the Sevillano.

California Greek Olives.—These are made from mature olives that are dark red to black in color. They are dry-salt cured and hence salty and shriveled. This type is eaten as a relish or used as a flavoring in such dishes as stews and spaghetti. Although high in food value, their outlet is limited to those with a liking for the salty, bitter taste. Gleanings of very ripe fruit are frequently used in this form, as are surplus ripe olives not wanted for canning or suitable for oil.

Another Greek-style olive processed in California during the war is packed in brine and vinegar. This type has not been produced in sufficient quantity over a long enough time to indicate its future possibilities.

Olive Oil.—Ripe olives are used for making oil, largely those varieties with a satisfactory oil content, such as Mission, Manzanillo, Redding, and Nevadillo. The Sevillano, Ascolano, and Barouni have such a low oil content that if they are used for oil at all it is merely a salvaging of cull fruit. Before the war, oil was usually only a salvage outlet for small, surplus, or overripe fruit. Only since 1940, with lower imports of olive oil and high prices, have olives for oil been a profitable outlet to growers. When imported olive oil and competing substitutes become more plentiful and cheaper, crushing for oil will be only a low-priced salvage outlet once more.

Fresh Shipments.—Fresh shipments of olives are possible for considerable distances, and out-of-state shipments have taken from 200 to 1,500 tons over the years. Since these are largely processed for home use by eastern buyers, they do not represent any substantial additional outlet. The Barouni, being a large, firm olive, contributes a considerable portion of fresh shipments. Prices are usually about the same as those for canning olives.

TABLE 2

EDIBLE OLIVE OIL PRODUCTION AND IMPORTS

	1925–1929	1930–1934	1935–1939	1940–1944
California olives crushed for oil (tons)	5,020	7,100	14,400	27,260
Average grower price per ton (dollars)	34	28	37	112
Domestic olive oil production (1,000 gallons)	183	277	575	1,090
Imports for consumption (1,000 gallons)	10,333	9,057	7,915	1,839
Average annual supply (1,000 gallons)	10,516	9,334	8,491	2,928
Per cent of supply from California olives	2	3	7	37
Per-capita supply (gallons)	.09	.08	.07	.02
Average wholesale price imported edible olive oil in New York (dollars per gallon)	2.30	1.71	1.97	4.19
Average wholesale price cottonseed oil at New York (dollars per gallon)	.72	.44	.66	.88

TABLE 3

CALIFORNIA OLIVES: UTILIZATION, 1940–1945

	1940	1941	1942	1943	1944	1945
	Tons					
Canned ripe and green ripe	16,200	16,700	11,100	15,500	13,800	13,900
Green Spanish	5,100	4,500	5,500	5,200	3,600	3,000
Sicilians	4,200	1,600	1,900	1,300	500	500
Greeks	2,200	2,500	1,500	2,700	1,500	400
Other	700	1,000	1,400	2,900	2,200	2,700
Fresh shipments	1,500	400	1,400	800	600	100
Subtotal, used as olives	29,900	26,700	22,800	28,400	22,200	20,600
Crushed for oil	39,100	28,300	34,200	28,600	19,800	9,400
Total production	69,000	55,000	57,000	57,000	42,000	30,000

Varieties

The size of the fruit and the oil content determine the use which is made of the different olive varieties. The two leading ones, Manzanillo and Mission, are medium- to small-fruited, with only a small percentage of the fruits classified as "mammoth." Mission is a good oil olive, while Manzanillo is the best general-purpose variety. The Sevillano and Ascolano are large-fruited varieties used almost entirely for canning. Large olives, being in more limited supply and selling for higher prices when canned, bring a higher price per ton than the smaller ones.

Mission.—This is the leading variety in acreage. Heavy production in some years results in a surplus of small fruit. This surplus means that the production must go for oil. Mission is a good oil olive, usually yielding 40 gallons or more of oil per ton. However, in some districts it is either a poor or an irregular producer. Fruit of the Mission ripens later than other varieties and is more apt to suffer frost damage before harvest. Also, its tall, upright habit of growth makes harvesting more costly. As a result, much Mission acreage is being or has been grafted over to other varieties, and it is not favored for planting at this time.

Manzanillo.—The Manzanillo is now considered the most suitable general-purpose variety. Its fruit is a little larger than the Mission, and ripens earlier. It is tender and of high eating quality when pickled. Although not quite so good an oil olive as Mission, it usually brings about the same price per ton for oil. The yield is about 38 to 40 gallons of oil per ton. A low, spreading tree with fairly regular bearing habits, this variety is currently recommended for the bulk of any new plantings in the Lindsay area. Local canners recommend that about 75 or 80 per cent of any new plantings be Manzanillo and the remainder Sevillano or Ascolano.

Sevillano.—Most of the olives in the Corning area are Sevillanos, the leading large-fruited variety. In other areas the Sevillano acreage is small. These are not good oil olives, and produce only a little over half as much oil per ton as Mission. They are not ordinarily sold for oil manufacture, so any surplus beyond ripe canning requirements must be used for green and other types. Large canned ripe olives or green pickles bring a price premium considerably above that for smaller sizes and therefore have a rather limited market. The olive industry feels that much increase in the production of large olives would reduce the premium and make these varieties less profitable to grow than the smaller, general-purpose, heavy producers which furnish the bulk of the olives sold.

TABLE 4

CALIFORNIA OLIVES: UTILIZATION BY VARIETIES, 1944

	Mission		Manzanillo		Sevillano		Ascolano	
Bearing acres	14,028		5,121		2,803		710	
Yield (tons per acre)	1.55		2.79		1.58		.79	
Types of utilization	Tons	Per cent	Tons	Per cent	Tons	Per cent	Tons	Per cent
Canned ripe	2,850	13	7,550	53	2,930	66	410	73
Green Spanish	50	..	2,920	20	520	12	30	5
Sicilians	0	0	20	..	470	10	10	2
Greeks	1,380	6	110	1	10	..	0	0
Other	750	4	1,060	8	300	7	60	11
Fresh shipments	20	..	40	..	30	1	0	0
Subtotal, used as olives	5,050	23	11,700	82	4,260	96	510	91
Crushed for oil	16,750	77	2,600	18	170	4	50	9
Total production	21,800	100	14,300	100	4,430	100	560	100

TABLE 5

MANZANILLO OLIVE SIZES AND PRICES IN THE LINDSAY AREA, 1940 AND 1944

Size grade	Average number of olives per pound	1940 (large crop)		1944 (fair crop)	
		Per cent of total	Price per ton	Per cent of total	Price per ton
	number	per cent	dollars	per cent	dollars
Giant	60	0.2	112.10	5.7	235.00
Mammoth	70	5.2	112.10	11.1	235.00
Extra large	82	15.4	102.10	16.2	210.00
Large	98	26.5	87.10	20.0	190.00
Medium	113	21.9	72.10	14.4	170.00
Standard	135	12.9	53.55	12.9	140.00
Culls	...	17.9	20.00	19.7	100.00
Total or average	.....	100.0	71.13	100.0	173.74

Ascolano.—The Ascolano is also a large-fruited variety, but about one grade size smaller than the Sevillano. Although some canners regard it as making a better canned ripe olive than the Sevillano, its softness and high cullings from damage in harvesting make it less desirable from the growers' standpoint. It yields more oil per ton than the Sevillano but too little for profitable sale as an oil olive.

TABLE 6

SEVILLANO OLIVE SIZES AND PRICES IN THE CORNING AREA, 1940 AND 1944

Size grade	Average number of olives per pound	1940 (large crop)		1944 (fair crop)	
		Per cent of total	Price per ton	Per cent of total	Price per ton
	number	per cent	dollars	per cent	dollars
Colossal and larger	40 and less	16.4	176.00	28.4	375.00
Jumbo	50	36.2	106.00	31.0	290.00
Giant	60	27.7	66.25	17.0	240.00
Mammoth	70	12.9	50.00	12.2	200.00
Extra large	82	5.1	30.00	4.9	150.00
Large	98	1.6	30.00	2.9	120.00
Culls	..	0.1	20.00	3.6	120.00
Total or average		100.0	95.63	100.0	276.75

Marketing

Growers and processors both realize that they have a joint interest in marketing a large volume of canned olives at good prices. They have also recognized the need of limiting the pack and using outlets other than canning in order to keep the price for canning olives from falling too low. The California Olive Association is a trade association of ripe-olive canners, formed to promote the interests of the olive industry. This is done largely through collecting and pooling information.

Processing.—The processing of olives is a specialized commercial undertaking requiring considerable capital as well as technical knowledge and ability. There are about 29 canners of ripe olives in California, and most of these also pack green and other types. A few also make olive oil. Four are grower-owned coöperatives. There are about 80 olive oil plants, but not all operate each year. A number of the canners and oil makers also own orchards from which they obtain part of their olives.

Marketing Programs.—In 1934–35, a marketing agreement under federal legislation was used by the industry in setting a price schedule for various sizes of canning olives. In 1937–38, there was a prorate plan under state legislation.

This limited the pack of canned ripe olives, with the result that some of the surplus was diverted to green and Greek types and the remainder to oil. In 1940, the State Director of Markets sponsored a meeting of growers and canners that resulted in agreements on prices satisfactory to both groups. Although similar meetings in 1941 and 1942 were not successful, growers received high prices for both olives and oil because of high demand. Ceiling prices on olives and oil largely determined prices for the 1943 to 1945 crops. The 1946 crop brought high prices, with strong competition among canners.

In the immediate future, prices probably will continue to be a matter of individual arrangements between canners and growers, although there will soon be a chance for improving returns through marketing programs under state or federal legislation. Such programs could improve grower returns by:

1. Promoting wider use and distribution of California olives.

2. Providing for the most profitable volume each year to each outlet, such as canned ripe, green, oil, etc., by planned processing and carry-over.

3. Dividing more profitable outlets equitably among growers, taking into consideration the kind of fruit, should such a prorate become necessary or desirable.

The Supply Situation

The future United States supply of olives and oil will depend on imports and on production in California. Imports are not expected to be higher than before the war, at least not for some time. California production may increase, but not over 20 per cent over the next fifteen years.

California Production Varies from Year to Year.—Olive trees are not regular producers from year to year. They tend to alternate bearing. Climatic and other conditions also result in a considerable variation in set of fruit. These influences, together with changes in cultural care, resulted in total production varying from a low of 14,000 tons in 1933 to a high of 69,000 tons in 1940 (fig. 5, p. 15). These fluctuations present a marketing problem—in some years production is too low to make full use of processing facilities and maintain an adequate supply of all kinds of olives at consumer level, and in other years there is a large surplus which can only be used for oil.

Effect of Age of Trees.—It takes several years for a newly-planted olive orchard to come into commercial bearing. Under good conditions, there may be enough fruit in the third or fourth year to pay for harvesting. With continued good growth and development, production may reach a ton per acre around the eighth year, and 3 tons by the twentieth year. Field inquiry, enterprise management studies, and observation furnish the background for figure

3, showing the effect of age on yield. The higher curve shows the level of average annual yields obtained in orchards on good soil, in suitable climatic zones, and with the best of cultural care. The lower curve is an estimate for the state as a whole, which includes orchards under all conditions, but with good cultural care assumed. Yields in any year may be above or below the estimates, but five-year averages could be expected to be not far from these curves.

But olive trees are long lived and may be expected, with proper care, to produce for 100 years or more. In California they remain in actual or potential production indefinitely, or until removed for more profitable crops or

TABLE 7

CALIFORNIA OLIVES: ACREAGE, PRODUCTION, AND FARM VALUE

	Total new plantings	Average non-bearing acreage	Average bearing acreage	Average annual total production	Average yield per bearing acre	Farm value per ton	Average total farm value
	acres	acres	acres	tons	tons	dollars	dollars
1925–1929	1,391	4,984	28,264	18,200	0.65	76	1,379,800
1930–1934	549	2,722	24,872	18,000	0.72	53	955,800
1935–1939	459	672	24,398	31,000	1.27	56	1,745,600
1940–1944	1,483	947	24,653	56,000	2.27	139	7,903,400
1945	638	2,169	25,076	30,000	1.20	269	8,070,000
1946 (prelim. est.)	.....	.....	24,751	46,000	1.86	352	16,192,000

use of land. Much of the bearing acreage is still relatively young or just reaching maturity or maximum production. Hence increased age of trees has contributed materially to the increased total production of olives in California in recent years and this upward trend will continue into the future.

Effect of Cultural Care.—Although the olive will survive considerable neglect, it has been shown to respond with better yields to better cultural care. Adequate irrigation, pest control, and proper pruning and fertilization are essential to a profitable succession of heavy crops in an individual orchard. And with generally improved cultural care in all commercial olive districts in recent years, total production has been materially increased. Some orchards and many border trees that were neglected during the 1930's were restored to fair production by better cultural care when olive prices became good in recent years. It is expected that yields and total production will remain high or continue to increase as a result of the continuation and improvement of good cultural care, at least as long as olive prices are high enough to make such care profitable. A moderate price decline would cause neglect only in low-yielding orchards in unsuitable locations which contribute a small portion of our total production, and would not be much of a factor in reducing that total production.

FIGURE 3

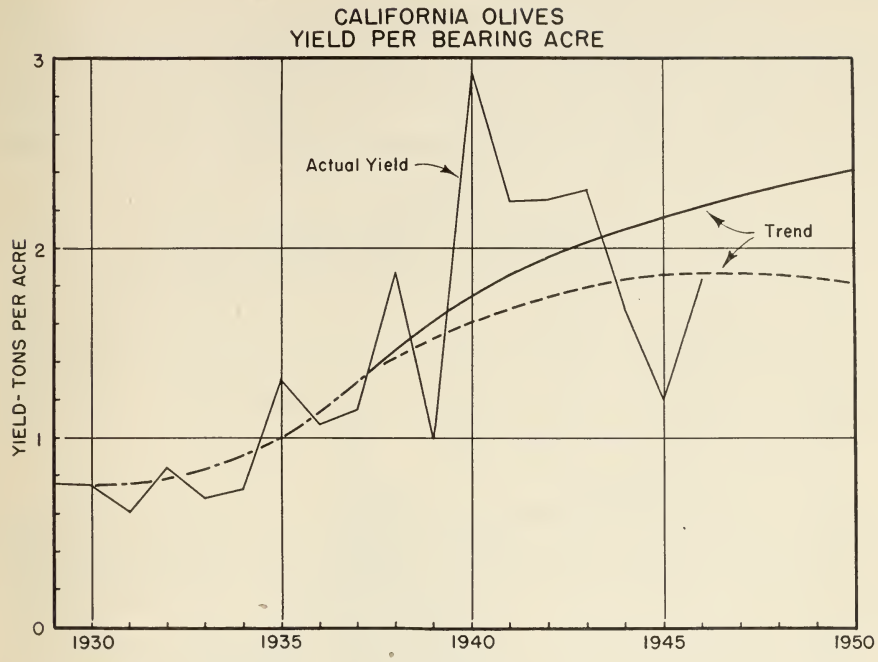
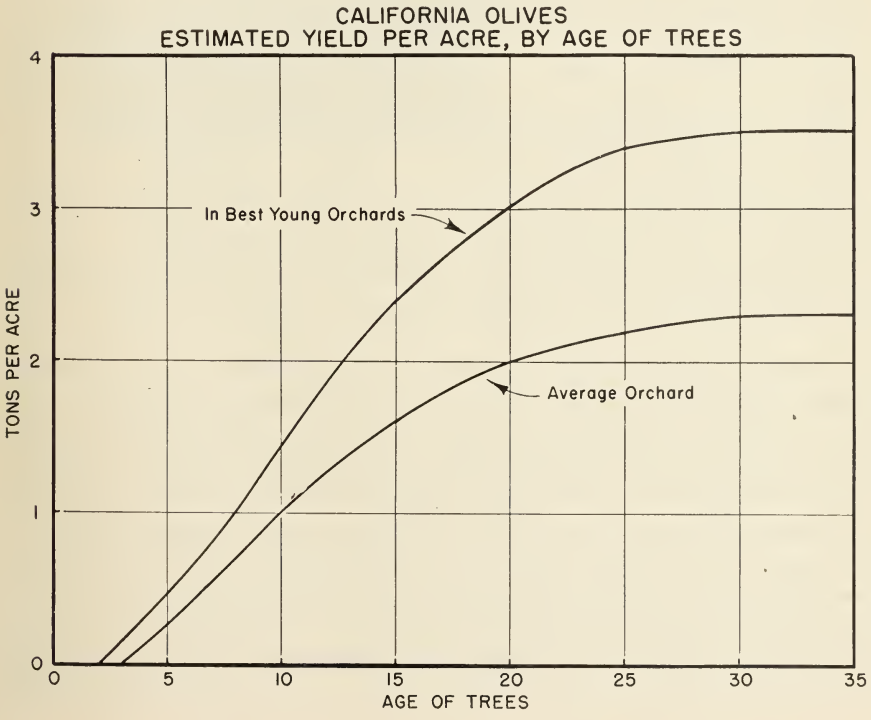


FIGURE 4



Effect of Location.—Olives are a subtropical fruit, well adapted to the warm, arid conditions and low frost hazard found in several large areas of California. Major areas which have proved suitable are the southeastern part of the San Joaquin Valley, with considerable concentration at Lindsay, the eastern edge of the Sacramento Valley around Fair Oaks and Oroville, and the Corning district near the north end of the Sacramento Valley. There is a considerable acreage in southern California, but yields are low and this area is declining in commercial importance. There are scattered plantings and border rows of olive trees in other regions, some in areas too cool for highly profitable production. Recent plantings are in commercial areas where good production is obtainable. Additional plantings will likewise be in suitable locations, while removal and abandonment will be largely in unsuited locations. Hence olive production in the future will be more largely concentrated in proven areas with greater yields per bearing acre to be expected. Figure 4 shows recent yields per bearing acre and the probable future trend.

Trend of California Production.—Present acreage and recent trends in yield and total production, if carried over to the future, indicate an upward trend in total production. This, however, is based on the following assumptions:

1. New plantings continuing at the rate of the last five years for only two years more, and thereafter dropping to an annual average of about 100 acres. This drop will come about because of a decline in oil olive prices after 1948.
2. Continued good cultural care in main commercial districts despite some decline in the price of all olives, but with canning olives remaining high enough in price to justify such care.
3. Heavier production in existing orchards due to increasing age of all trees and the coming into bearing of recent and additional plantings.
4. Little tree removal or neglect of orchards except in areas of poor production and hence not much of a factor in reducing total production.
5. Continuing improvement in cultural methods through better knowledge of fertilization, pest control, and equalizing yields from year to year.

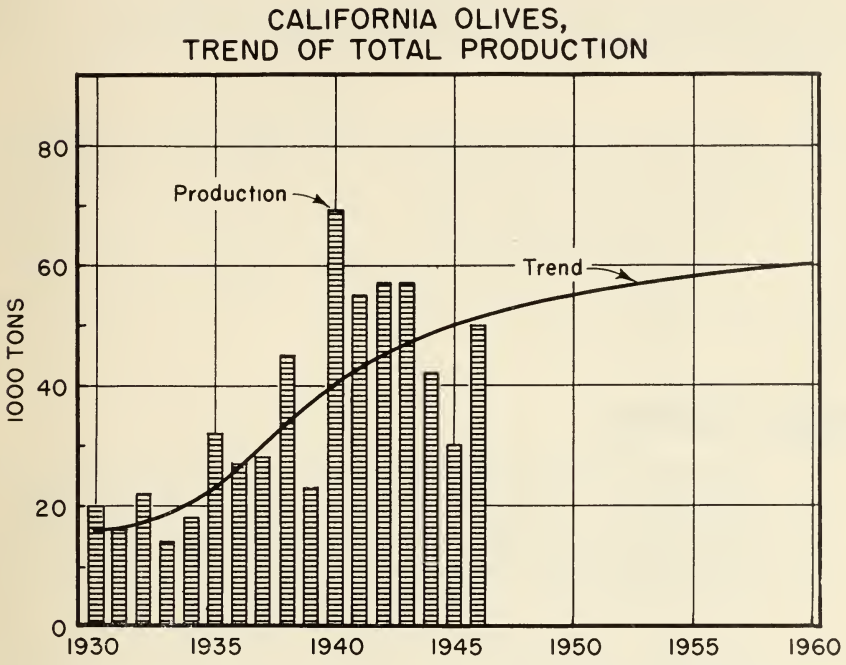
Such calculations give us an increase at the rate of about 500 tons a year. In forecasting future production, it is hard to decide whether to start from the low prewar figures or the high production since 1940. With good olive prices maintained, the upward trend in yields should continue. With low prices and poor care it might turn downward. Keeping these factors in mind, the trend line in figure 5 was drawn to extend from a normal production of about 50,000 tons in 1945 to 60,000 tons around 1960. Naturally, short crop years will fall far below this line, while occasional crops will be considerably above it.

In view of the long time it takes young orchards to come into bearing, heavy additional plantings due to continuing high prices would not greatly raise the trend in figure 5 by 1955 to 1960. Yield per bearing acre may not be maintained

at recent high levels if low prices of olives reduce cultural care, or if increased infestation of scale insects makes good cultural care too expensive.

Olive Imports.—Imports of olives to the United States are expected to continue at about recent levels in the near future. The Office of Foreign Agricultural Relations of the United States Department of Agriculture is watching developments abroad and sees no immediate opportunity for any exporting

FIGURE 5



country to increase materially its exports to this country. Pickled olive production in Spain, our main source of imports, is expected to continue with little, if any, expansion. Italy and Greece are resuming production, but United States imports from these countries will probably be somewhat less than in prewar years. An insignificant quantity of pickled olives is produced in Peru and a few may find their way to the United States, but these will have little effect on supply or price. Recent plantings in Argentina are not expected to result in any significant exports to this country for some years, and only then if plantings expand and production increases materially over present levels. (In 1944–45, Argentina produced only 10,544 tons, of which 59 per cent went for oil.) But high consumer incomes and high olive prices in the United States will make this the major market for any olives exported from foreign countries. Imports in 1946 rose to 11 million gallons from an average of 9½ million for the two previous years. Until after 1960 there will not be enough olives to result in imports to this country much above recent levels of 9 to 11 million gallons of all types.

Olive Oil Imports.—Our olive oil imports fell to a very low level from 1940 to 1944 (see table 2, p. 7). Italy and Spain were the main prewar sources of supply, with France and Greece furnishing some. The trend of imports was downward from 1930 to 1939, and the price was also declining during this period. The future demand and price for olive oil will probably greatly influence our future imports, but it is doubtful if they will return to the 10 or 11 million gallons of the 1920's. Imports will, however, again become large enough to determine the price within two or three years. This will result in California's olive oil again becoming a mere fraction of United States total consumption.

Tariffs.—The present United States import duty (1946) is 20 cents a gallon for green olives in brine, 30 cents a gallon for pitted, stuffed, and ripe olives in brine, and 5 cents a pound for dried ripe and other olives. The duty on edible olive oil is 8 cents a pound or 60 cents a gallon, in packages of less than 40 pounds, and 6½ cents a pound or 49 cents a gallon in larger containers. These duties are equivalent to about $60 a ton on green pickling olives, $90 a ton on ripe canning olives, and $20 a ton on oil olives.

Demand Factors

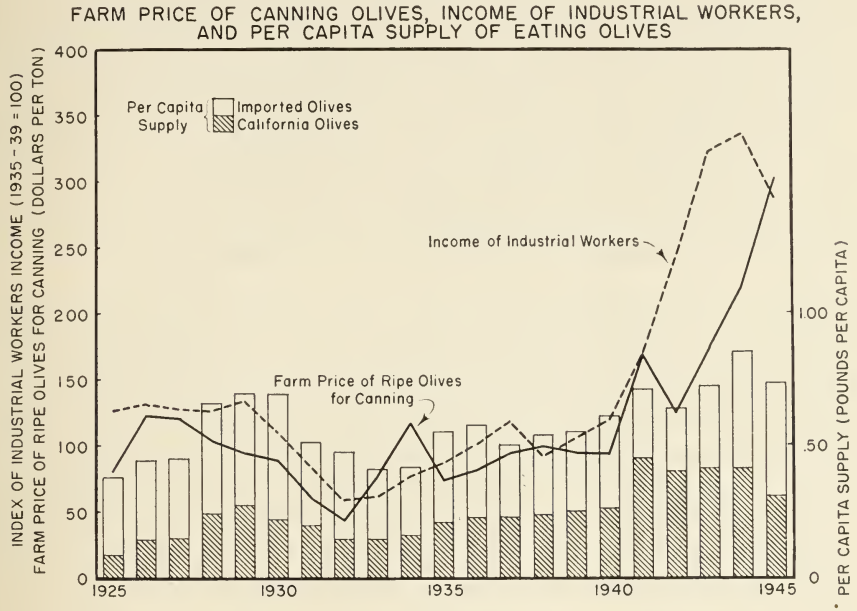
The demand for olives and oil is the result of consumer desire and ability to buy. An increase in demand would result in a higher price for the same amount of olives or in more being sold at about the same price. But it is necessary to consider the demand for olives and for oil separately. Figure 6 shows the price per ton for California ripe canning olives along with the index of income of industrial workers and the per-capita supply of olives, both California and imported.

The Demand for Olives.—Recent high wartime consumer incomes have resulted in record sales of all kinds of olives at record prices. Per-capita consumption was only .4 pounds in the depression year of 1933, but this rose to .8 in 1944. This looks like an increase in demand, but with wartime controls, ceiling prices, and shortages of many things, these recent increases are not a dependable indication of the future.

Olives are a luxury product to most people and nation-wide consumption is low. Per-capita consumption, however, is not a certain indication of future use, since many people use no olives, while regular users eat many times the .8 pounds per capita. People with a taste for olives furnish the potential demand and their number can be increased. To use olives, the consumer must want them, must be able to find them, must have the price, and must be willing to pay the price asked. More people will have the price under conditions of high employment and income than during a depression. Current

consumer income is at a high level which is expected to continue at least well into 1947, so demand for olives should continue high in the immediate future. This applies to all olives—ripe, green, and both domestic and imported. With an expected increase in trade and the large variety of excellent products by California canners, olive consumption may soon reach 70,000 tons, or 1 pound per capita, as compared with the 47,120 ton average for 1940–1944.

FIGURE 6



California Ripe Olives.—California ripe olives also show a modest increase in sales. Tonnage canned from 1934 to 1938, which would largely be the supply from 1935 to 1939, was .16 pounds per capita annually. For the 1941 to 1945 period, it was .22 pounds, an increase of 37 per cent, as compared to the increase of 33 per cent for all olives, including green and other types. It looks like a little gain for the canned ripe olive. Packs of over a million cases in 1940, 1941, and 1943 moved without difficulty as compared with those of 1937 and 1938. In fact, much greater packs could have been disposed of since 1943 had they been available, and probably at prices above the ceilings that were set. With continued high consumer purchasing power for a few years, the trade has an opportunity to market more canned ripe olives than ever before if they are not overpriced.

California canners in recent years have also processed and sold a number of green olives and some other variations of both green and ripe—chopped, pitted, and stuffed. Some of these products, if well advertised and distributed, may meet with good consumer acceptance and provide an outlet for additional olives at favorable prices.

Demand for Olive Oil.—The future demand for olive oil may continue to decline. It, too, is a luxury product used largely by those who prefer its flavor and character for cooking and salad uses over cheaper vegetable oils. Although it is the finest of all edible oils, it has not yet been found to contain any scarce nutritional elements not adequately available in other foods. In recent years olive oil has sold at from two to four times the price of vegetable oils made from peanuts, soybeans, cottonseed, and corn. This price relationship may continue or be narrowed. It is quite possible that former olive oil consumers who were forced to use substitutes in recent years may have become accustomed to the cheaper oils and may continue to use them even after olive oil again becomes available. This would result in a decreased demand for olive oil.

It does not seem reasonable to expect many new users of olive oil among those who never used it formerly. Per-capita consumption of olive oil was about .10 gallons in 1929 and fluctuated around a level of .06 annually from 1935 to 1939. Because of short supplies, it was between .01 and .02 from 1941 to 1944. This consumption is not spread over our entire population but concentrated among a small portion who are customary users. These may be more likely to decline in number than to increase as the proportion of our population from Mediterranean countries drops. Consumption of olive oil in the United States was going down during the decade before the war, as were prices. This indicates a declining demand which will likely be felt again when olive oil and competing fats and oils again become more plentiful. There is, however, some hope that high quality California olive oil may enjoy some special demand for blending with imported and substitute oils. Under conditions of high prosperity there would also be more demand for olive oil than if lower incomes caused a shift to cheaper substitutes.

Olive Prices

The price a grower receives depends on the kind, size, and quality of olives he has to sell, the use the buyer thinks he can make of them, and the price the buyer expects to receive for the processed olives and the oil. The price outlook for canning olives is much better than for those to be used only for oil. However, the canning outlet is limited, and in years of high production a number of olives suitable for canning may have to go for oil. The oil outlet, while unlimited, brings a very low price. The price outlook for each will be discussed separately, but both are affected by general economic conditions and price levels.

General Price Level.—When prices of everything go up together, we are said to have a rise in the general price level. Individual commodities may rise or fall in relation to this general level, but the majority of them go along with it. This is true of olives, which have gone up along with the recent rise in the

general price level. How much farther prices will rise and when the turn will come cannot be predicted at this time, although in March of 1947, it looked as if we were nearing the high point. When and if the general price level drops, olives and olive oil will also tend to go down in price. We do not expect an early return to the prewar general price level.

Consumer Food Expenditures.—For many years, consumers' food expenditures have been a rather uniform proportion of their incomes. As incomes rose during the war, food expenditures also rose, because people bought more food and paid higher prices for it. With shortages of many things, such as new automobiles, and with rationing of gas and tires, and rent control, consumers could have spent more for food if it had been available and not controlled in price. Now, however, competing items are becoming more plentiful, which means that people will probably spend a little less for food even if incomes do not go down. With less money spent for food, prices will tend to go down. This will include olive and olive oil prices, which are already turning downward.

Processing and Marketing Costs.—These costs have risen in recent years with increased labor, material, transportation, and other costs. It is expected that they will remain high even after retail food prices go down. Cannery and distributive labor, largely organized, is in a better position to resist income reductions than are olive growers. On the other hand, there have been many improvements in olive processing and equipment. But the grower will probably be hardest hit by future drops in olive and oil prices.

Canning Olive Prices.—The future prices of canning olives may fall considerably below the high prices received from 1943 to 1946 but will probably remain somewhat above prewar levels for several years. In addition to the general price factors mentioned above, canning olive prices will be greatly influenced by the supply or size of the crop and the current demand for canned ripe and other olives processed in California. Present demand is excellent, with almost no carry-over in recent years. It is not likely that the supply of processed olives can be built up fast enough to lower the price badly for several years. The supply of olives for canning, however, cannot be forecast. With a short crop in 1945 and a fair one in 1946, our orchards could come forth with a bumper crop in 1947, perhaps over 70,000 tons. If or when that happens, it will depress the price. Canners are quite optimistic at present, however, and are willing to put up the largest pack in history. Canning olives need not go back to prewar levels because demand should continue good for many years and the price level is not expected to drop back to that of prewar years, or at least not for a long time. If all of California's expected production increase of 10,000 tons by 1960 were used for canning, it would only increase the total supply of all olives used as olives by 21 per cent over the 47,120 ton average for 1940–1944.

Oil Olive Prices.—Prices of olives used for oil are certain to decline almost to prewar levels within a few years. The bulk of the supply was imported before the war. Imports are still small but will increase as fast as production in the Mediterranean Basin picks up. Production there was low in 1946 because of a very short olive crop in 1945, but will be near average from the 1946 crop. However, exports are expected only from Spain and perhaps Greece this year. Urgent needs for fats and oils in Europe must first be met, at least until arrangements have been made to obtain cheaper substitute oils in exchange. There will probably be no increase in total production in near future years, so that even with some changes, the net amount available for export will not differ greatly from prewar volume. We do not know how soon imports of olive oil can reach that volume, but when they do, and when other fats and oils become plentiful, the price of olive oil will again be low. This means that the price of oil olives will be much lower than that of canning olives. This point may come in 1948 or may not be reached until 1950.

Orchard Earnings

As in the past, only good, efficiently operated, high-producing olive orchards will be profitable in the future. Olive orchard management studies conducted by the Agricultural Extension Service in Tehama County in 1938–1942 and in Tulare County in 1940 and 1941 show that adequate, economical cultural care, resulting in good yields of good fruit, is essential to profits. A brief summary of the Tehama County study appears in table 8. Price is only one factor which determines profit. Yield per acre times price per ton less costs per acre equals profit. In considering any orchard, find out or estimate its yield carefully.

Yield per Acre.—The average yield per acre over a period of years is the most important profit factor in the individual orchard. It is the result of location of the orchard as to soil and climate, the age of the trees, and the cultural care provided, as well as seasonal climatic variations.

Individual Grower Price.—The price received for olives from a particular orchard may vary widely from the average farm value of all olives because of the variety, size, and quality of the fruit produced. Size and quality of fruit may be affected through proper cultural care.

Costs.—Production costs of olives rose greatly during the war, but were not so high as prices. These costs will tend to remain high, even after prices drop. In recent years, the parlatoria and other scale insects have greatly increased pest control costs in certain areas of the state, and these pests may spread. Current farm wage rates are two and a half to three times the prewar level.

These may be expected to drop somewhat with a more plentiful labor supply, although never to prewar levels. Anyone considering future ownership will do well to estimate his probable costs as well as income. A standard of costs is presented in table 9, not as a prediction, but as a guide in figuring costs for a particular orchard at a specific time. The hours of operator's labor per

TABLE 8

GENERAL SUMMARY OF TEHAMA COUNTY SEVILLANO OLIVE STUDY

	1938	1939	1940	1941	1942	5-year average
Yield (tons per acre)	1.45	.30	3.39	1.51	2.58	1.85
	Dollars					
Average price per ton	67.38	172.30	95.63	158.40	88.96	101.71
Cultural labor and material costs per acre	27.42	28.07	26.73	29.77	34.16	29.23
Harvesting cost	34.76	9.58	77.64	47.62	109.12	55.74
Cash overhead costs	8.20	4.42	9.43	7.77	12.16	8.40
Depreciation, trees and equipment	10.65	10.61	10.68	11.00	11.65	10.92
Interest on investment at 5 per cent	21.96	21.96	22.57	22.20	22.08	22.15
Total costs per acre	102.99	74.64	147.05	118.36	189.17	126.44
Total income per acre	97.63	50.96	323.94	239.08	229.25	188.17
Management income per acre	−5.36	−23.68	176.89	120.72	40.08	61.73
Capital and management income per acre	16.60	−1.72	199.46	142.92	62.16	83.88

acre shown in the first column is the probable maximum that could be performed by a working operator and although included in costs could be considered as noncash expense by such an owner.

With labor at 60 cents an hour (a possible postwar level), with a 3.5 ton yield, and with other costs as shown in table 9, the cost of producing olives in the San Joaquin Valley would be over $300 an acre and a little under $100 per ton. This would allow some profit with olives averaging around $100 to $130 a ton. But an orchard yielding 3.5 tons per acre (annual average) is a good, well-managed orchard. We can be reasonably sure that such an orchard will make some profit in the future. The reader is warned, however, not to accept this standard without taking into account current local yield and cost conditions.

TABLE 9

A STANDARD OF LABOR, MATERIAL, AND OTHER COSTS FOR OLIVE PRODUCTION IN MATURE OLIVE ORCHARDS IN TULARE COUNTY WITH A YIELD OF 3.5 TONS PER ACRE

	Operator's labor	Total labor	14-hp. tractor	1½-ton truck	Cost per acre	Cost per ton
	Hours per acre				Dollars	
Pruning and brush disposal	21	22		1	14.70	
Cultivation	6	6	6		10.50	
Irrigation, ½ hour per acre inch	18	18			10.80	
Miscellaneous other cultural labor	6	8	1	2	8.95	
Total cultural labor	51	54	7	3	44.95	12.84
Picking, 36½ pounds per hour average	8	200			120.00	34.29
Hauling boxes, fruit, etc.	6	6		6	12.60	3.60
Total labor cost	65	260	7	9	177.55	50.73
Irrigation water, 36 acre inches at $0.30 per acre inch					10.80	
Covercrop seed					1.50	
Fertilizer to provide 125 pounds of nitrogen per acre					12.50	
Pest control—contract fumigation, once in 2 or 3 years, or spraying					40.00	
Miscellaneous other material					1.00	
Total material cost					65.80	18.80
General expense—office, telephone, car, etc. (5% of above costs)					12.17	
County taxes on land, trees, and equipment ($200 at $2.25)					4.50	
Repairs to improvements and equipment					2.00	
Compensation insurance $4.00, building and equipment insurance $0.50					4.50	
Total cash overhead cost					23.17	6.62
Total cash costs					266.52	76.15

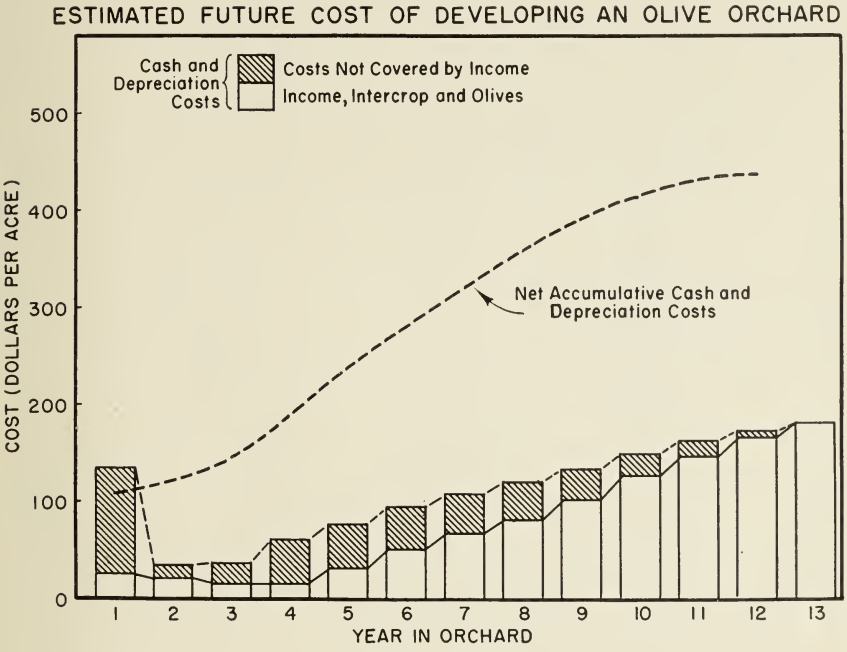
Investment and investment overhead based on a 30-acre unit	Original cost	Average investment	Interest at 5%	Depreciation		
	Dollars an acre					
Trees	1,000.00	1,000.00	40.00	....		
Buildings for equipment and help	60.00	30.00	1.20	2.00		
Irrigation system and pipe line	100.00	50.00	2.00	4.00		
Tillage equipment	16.00	8.00	.32	1.00		
Harvesting and miscellaneous equipment	16.00	8.00	.32	2.00		
Land	200.00	200.00	8.00	....		
Total investment	1,392.00	1,296.00				
Total interest on investment			51.84		51.84	14.81
Total depreciation				9.00	9.00	2.57
Total cost of production					327.36	93.53

Labor costs above are computed at the following rates per hour: man labor, $0.60; 14-drawbar-hp. tractor, $1.15; 1½-ton truck, $1.50. Tractor and truck rates include overhead based on use of tractor and truck on 30 acres only.

New Plantings.—It takes a long time and a considerable outlay of capital to bring a young olive orchard into bearing. Using the yield curve for the best orchards, as shown in figure 3 (p. 13), a price of $100 a ton, and costs in line with those in table 9, we discover the following:

1. In the thirteenth year, income will cover annual cash and depreciation costs, and by then a net outlay (costs less intercrop rent and olive sales) of $436 per acre will have been made for the trees alone, in addition to that for land and other improvements and facilities (see fig. 7).

FIGURE 7



2. When interest on investment (land, equipment, and net cost of trees) at 4 per cent is included, income from 3 tons of olives (reached in the twen tieth year) is required to cover costs, and by that time accumulative net outlay for trees is $945.

Under less favorable conditions, such as higher costs, lower olive prices, or lower yields, costs of trees would be higher or first earnings would be reached later, if at all.

Only under conditions where olive prices were higher in proportion to costs would it appear profitable to plant additional olive orchards, except under unusual circumstances. Such circumstances might be the rounding out of an existing farm business or obtaining more of a special variety for a specific purpose. It is too late now for additional plantings to share in the favorable prices and earnings of the next few years.

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